

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte SE WOONG PARK

Appeal No. 2006-1020
Application No. 09/899,066

ON BRIEF



Before KRASS, RUGGIERO, and BARRY, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-28 which are all of the pending claims of the application.

The invention is directed to a control method for a CCD camera comprising: controlling movement of a lens by switching between two sets of pre-stored lens trace data, each corresponding to one of two photographing modes selected on the basis of comparing a detected illumination value to a reference illumination value.

Claims 1 and 21 are illustrative:

1. A control method of a CCD (Charge Coupled Device) camera having at least one photographing mode, comprising:

pre-storing trace data of a lens for the CCD camera;

detecting an illumination of a photographing region to be photographed with the CCD camera;

comparing the detected illumination with a reference illumination value;

setting a photographing mode of the CCD camera on the basis of comparing the detected illumination with a reference illumination value; and

controlling a movement of a lens of the CCD camera in accordance with the set photographing mode by using corresponding pre-stored trace data of the lens.

21. A control method of a CCD (Charge-Coupled Device) camera having a lens and a nighttime mode and a daytime mode, comprising:

pre-storing first and second trace data of a lens for the CCD camera;

detecting an illumination of a photographing region to be photographed by a CCD camera;

converting a photographing mode of the CCD camera into the daytime mode or the nighttime mode by judging whether the detected illumination is not less or greater than a reference illumination value;

loading the first trace data for controlling a lens of the CCD camera so as to photograph the photographing region through an OLPF (Optical Low Pass Filter) when the photographing mode is converted into the daytime mode;

loading the second trace data for controlling the lens of the CCD camera so as to photograph the photographing region without imaged light of the photographing region passing through the OLPF when the photographing mode is converted into the nighttime mode; and

adjusting a focus of the lens of the CCD camera on the basis of the loaded trace data.

The examiner relies on the following references:

Beis	5,172,220	Dec. 15, 1992
Chino	6,046,863	Apr. 4, 2000
Mizoguchi et. al. (Mizoguchi)	5,959,669	Sep. 28, 1999

Claims 1-5, 9, 11-13, 17 and 26-27 stand rejected under 35 U.S.C. § 103 as obvious over Beis (U.S. Patent No. 5,172,220) in view of Chino (U.S. Patent No. 6,046,863).

Claims 6-8, 10, 14-16, 18-25 and 28 stand rejected under 35 U.S.C. § 103 as obvious over Beis in view of Chino and further in view of Mizoguchi (U.S. Patent No. 5,959,669).

OPINION

We affirm the rejection under 35 U.S.C. § 103 of claims 1-5, 9, 11-13, 17 and 26-27, and the rejection under 35 U.S.C. § 103 of claims 6-8, 10, 14-16, 18-25 and 28.¹

Rejection of Claims 1-5, 9, 11-13, 17 and 26-27

Beis teaches switching between two modes in a CCD camera (Col. 6 lines 14-16) according to detection of the incoming light intensity as compared to a threshold light intensity (Col. 2 lines 17-36) wherein the modes are defined by insertion or removal of a filter. Specifically, an infrared filter is inserted when daytime operation is detected and removed when nighttime operation is detected (Col. 6 lines 35-45). It is the examiner's view that Beis does not teach that insertion or removal of a filter causes an out-of-focus condition or that such a condition is correctable by switching between pre-stored zoom trace data.

¹ In response to appellant's traversal of "newly presented grounds of rejection" (brief at 10) we note that the examiner's remarks of pages 3-7 of the answer are merely responsive to appellant's arguments.

The examiner relies on Chino for the teaching that zoom tracking of a camera changes based on insertion or removal of filters due to distinct refractive index of the filter as compared to air (Col. 4 lines 45-48). Chino further teaches that such a zoom error may be corrected by switching between prestored zoom tracking curves (Col. 4 lines 50-52; 62-65) for both filter removed and filter inserted conditions (curves 40 and 41 respectively as depicted in Fig. 4). The examiner argues that it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the CCD camera of Beis with the zoom lens of Chino for the purpose of providing detailed images of far away objects, for example, to increase the surveillance function thereof (Answer at page 23).

We have reviewed the evidence before us and we conclude therefrom that the examiner has presented a prima facie case of obviousness with regard to the instant claimed subject matter that has not been successfully rebutted by appellant. Accordingly, we will sustain the rejection of claims 1-5, 9, 11-13, 17 and 26-27 under 35 U.S.C. § 103.

It is reasonable that one of ordinary skill in the art would have been motivated to improve the function of the camera of Beis with the zoom lens of Chino for the purpose of providing enhanced imaging of distant objects. It would have been especially obvious given that Beis teaches insertion and removal of optical filters in response to detected light intensity and that Chino teaches that insertion and removal of filters from an optical path results in an out-of-focus condition. A suggestion to combine references may come from the nature of a problem to be solved, leading inventors to look to references relating to possible solutions to that problem. Pro-Mold and Tool Co. v. Great Lakes Plastics Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). In this case, one of ordinary skill in the art would have been motivated to correct the out-of-focus condition caused by the filter manipulation of Beis by incorporating a zoom lens and control method as taught by Chino such that the filter induced focus error of Beis is compensated for by the prestored zoom tracking curves taught by Chino.

We further note that a stronger rejection may have been made based on motivation to modify Chino in view of Beis; however, we look at the totality of the teachings of the references and it is apparent to us that the skilled artisan having both of these teachings before him/her would clearly have found the instant claimed invention obvious, within the meaning of 35 U.S.C. § 103.

Appellant argues that the combination of Beis and Chino involves "improper hindsight reconstruction" and that the examiner's motivation involves "nothing more than a broad, conclusory, speculative statement" (Brief at page 20). Newly presented evidence is provided in the Examiner's Answer to support motivation (Answer at page 23). Specifically, Williams teaches that it would be desirable to incorporate autozoom in a B&W and color CCD surveillance camera. As alluded to by appellant, if the citation of a new prior art reference is necessary to support a rejection, it must be included in the statement of rejection. Even if the prior art reference is cited to

support the rejection in a minor capacity, it should be positively included in the statement of rejection. In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n. 3 (CCPA 1970). However, the Williams reference is not necessary to support motivation to combine Beis and Chino. The obvious advantage of providing a surveillance camera with autofocus zoom together with a specific teaching of compensating a filter induced out-of-focus with pre-stored zoom data provides sufficient motivation for the combination of the cited references. Appellant contends that motivation involving correction of lens out-of-focus is insufficient because it is not claimed (Brief at page 21). However, it is not a requirement that motivation to combine be found within appellant's claims. Nevertheless, we note that such motivation is cited as the primary object of appellant's invention (Specification page 1, line 8).

Appellant further argues that the references of Beis and Chino are concerned with distinctly different problems and that they function differently (Brief at page 13). The examiner responds that both references are concerned with insertion and removal of optical filters from the optical

path of a camera lens (Answer at page 23). Appellant's argument that "hundreds of thousands of camera references employ filters" is beyond the scope of the inquiry. We find that both of the cited references are in the same field of applicant's endeavor and are reasonably pertinent to the particular problem with which the applicant was concerned, namely, insertion and removal of optical filters from the optical path of a CCD camera for the purpose of improving picture quality, for example, to prevent picture quality deterioration or adjust lens sensitivity in view of changing light intensity.

We further note that appellant merely argues the references individually. Appellant argues that Beis does not disclose or suggest use of a zoom lens system or a zoom lens system with autofocus or a system that uses a neutral density filter that upsets autofocus (Brief at page 17) and that Beis indicates no focus error upon insertion or removal of filters from an optical path (Brief at page 19). Appellant further argues that Chino fails to disclose or suggest a surveillance camera system, a fixed focus lens,

or identification of an object of interest for zooming or tracking in a surveillance operation (Brief at page 19). This line of argument is immaterial because 35 U.S.C. § 103 does not require the presence of each and every limitation of the claim in each combined reference in an obviousness-type rejection. That is, one cannot attack references individually where the rejection is based on a combination of references. In re Merck, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986). Appellant has merely pointed to the deficiencies in the primary reference of the limitations for which the secondary reference is relied upon. With respect to appellant's argument that Chino only discloses adjusting focus upon insertion or removal of a filter and not upon selection of a daytime or nighttime mode (Brief at page 22), we note that the filter of Chino is inserted or removed upon selection of a daytime or nighttime mode.

Regarding appellant's allegation of examiner admission (Brief at pages 17-18), we note that it is not an admission to state that the zoom lens of Chino may be incorporated

into the camera of Beis without incorporation of an ND filter. Appellant has ostensibly argued that the examiner's combination "teaches away" and that it would have been physically impossible given teachings of only one filter in each reference. However, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, the autofocus lens and control of Chino may be incorporated in the CCD camera of Beis without inhibiting the function of the image sensors. Furthermore, the zoom control of Chino does not require incorporation of the particular neutral density filter. One of ordinary skill in the art would have known that the zoom control method of Chino could be integrated into the light detection method of Beis while using the infrared filter of Beis, the neutral density filter of Chino, or any equivalent filters related to improving picture quality,

for example, to prevent picture quality deterioration or adjust lens sensitivity in view of changing light intensity. A mere difference between the filter types of Beis and Chino does not preclude a combination of Beis's light intensity mode and Chino's zoom control method, especially considering that the method of Chino solves the very problem known, at the time of the invention, to be caused by Beis's changing light intensity modes, namely, focus error.

Accordingly, the examiner's decision rejecting claims 1-5, 9, 11-13, 17 and 26-27 under 35 U.S.C. § 103 is affirmed.

Rejection of Claims 6-8, 10, 14-16, 18-25 and 28

The examiner relies on the combination of Mizoguchi with Beis and Chino for a method of incorporating an optical low pass filter (OLPF). Mizoguchi teaches a method of inserting an OLPF when photographing in color to eliminate false color and removing an OLPF when photographing in black and white to attain high resolution (Col. 8 lines 35-50).

Appellant argues that Mizoguchi fails to teach this method; however appellant is merely pointing to an alternative method in the background of Mizoguchi involving

swapping a crystal LPF with one of different properties for the proposition that Mizoguchi fails to teach inserting an OLFP when photographing in color to eliminate false color and removing an OLFP when photographing in black and white to attain resolution (Brief at page 25).

Appellant further argues that Mizoguchi fails to disclose "day-night photographing"; however, Mizoguchi necessarily involves this method because it teaches consideration of the photographic conditions unique to the particular day (Col. 19 lines 51-61) within the context of changing camera modes in accordance with detected light intensity.

With respect to appellant's arguments that Mizoguchi is directed to the imaging of different objects and that the combination involves improper hindsight, we note that Mizoguchi is only relied upon for the method of using an OLFP to improve image quality in a CCD camera. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated an OLFP in the combined method of Beis and Chino for the purpose of eliminating false color and attaining high resolution, especially given that it would have been a trivial matter

to switch between various types of filters for use in an autofocus method for a CCD camera.

Accordingly, the examiner's decision rejecting claims 6-8, 10, 14-16, 18-25 and 28 under 35 U.S.C. § 103 is affirmed.

DECISION

The rejection of Claims 1-5, 9, 11-13, 17 and 26-27 as obvious over Beis (U.S. Patent No. 5,172,220) in view of Chino (U.S. Patent No. 6,046,863) is sustained. The rejection of claims 6-8, 10, 14-16, 18-25 and 28 as obvious over Beis in view of Chino and further in view of Mizoguchi (U.S. Patent No. 5,959,669) is sustained.

Accordingly, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

Errol A. Krass
ERROL A. KRASS

Administrative Patent Judge)

)

Joseph F. Ruggiero
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